

Positive Resist Compositions Containing Non-Polymeric Silicon Additives

Abstract of the Disclosure

Acid-catalyzed positive resist compositions suitable for bilayer or multilayer lithographic applications are enabled by the use of a combination of

5 (a) an acid-sensitive imaging polymer, (b) a radiation-sensitive acid generator, and (c) a non-polymeric silicon additive. The imaging polymer is preferably imageable with 193nm or shorter wavelength imaging radiation. The resist compositions preferably contain at least about 5 wt.% silicon based on the weight of the imaging polymer. The compositions generally provide reduced line

10 edge roughness compared to conventional silicon-containing resists.